

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) Method for shaping a roll cleaning brush (1) for work rolls, comprising the steps of: providing with ~~a brush covering (2), especially for work rolls used in metal, especially aluminum, hot-rolled strip mills, which comprises a supporting base body (3) which is supported at its ends; mounting a and on which the brush covering (2) made of wires onto the base body is mounted,~~ which brush covering (2) is pressed against the work roll (4) with an adjustable force or a well-defined insertion depth to produce a cleaning effect, ~~wherein; forming~~ the shape of the brush covering (2) or of the cleaning brush (1) ~~is formed~~ according to the geometry of the roll (4) with a contour based on the mathematical function of a polynomial, an exponential function, or a trigonometric function, ~~etc.~~

2. (Currently amended) Cleaning brush with a brush covering (2) for use in metal, especially aluminum, hot-rolled strip mills, which is produced in accordance with Claim 1,

wherein the cleaning brush or its brush covering (2) has a contour which matches the contour of the ~~rolls, especially the~~ work rolls (4), and that it has the contour of a given polynomial, an exponential function, or a trigonometric function, etc.

3. (Currently amended) Cleaning brush in accordance with Claim 2, and further comprising means for displacing the cleaning brush, the displacing means being arranged ~~wherein it is provided,~~ at at least one ~~of its~~ terminal of the brush bearings, ~~with means for displacing it in its axial direction or is coupled with the displaceable work rolls.~~

4. (Currently amended) Cleaning brush in accordance with Claim 3 2, wherein the means for displacing the cleaning brush are coupled, preferably in a synchronized way, with ~~the~~ means for displacing the roll.

5. (Currently amended) Method of operation of a cleaning brush with a brush covering (2) in metal, especially aluminum, hot-rolled strip mills, which is produced in accordance with claim 1, wherein the shape of the brush covering (2) or the shape of the cleaning brush (1) is so extensively matched to the shape

of the roll (4) that a largely uniform contact pressure between the roll and the brush covering or cleaning brush is established over the body length of the roll, preferably in the region of a the strip width of the roll, with a minimal contact force  $F_B$  for a sufficient cleaning effect ~~(Figure 4a)~~.

6. (Currently amended) Method in accordance with claim 5, wherein an the empirically known bending deflection of the base body (3) of the brush and an the empirically known thermal crown of the roll (4) are compensated by a conformal symmetrical camber of the brush covering (2), taking into account the effect of the rigidity of the base body (3) of the brush.

7. (Previously presented) Method in accordance with claim 5, wherein if the work roll (4) is axially displaced during the operation by a functionally related measure of length, the cleaning brush (1) is also displaced by a preferably equal measure of length in the same direction in order to maintain its relative longitudinal position to the roll and to the shape of the roll.

8. (Previously presented) Method in accordance with claim 5, wherein if the work roll (4) is axially displaced, the contact

pressure of the brush is adjusted to the altered effective roll geometry.

9. (Currently amended) Cleaning brush in accordance with claim 3 7, wherein it is provided, at at least one of its terminal bearings, with means for displacing it in its axial direction or is coupled with the displaceable work rolls.

10. (Previously presented) Cleaning brush in accordance with claim 9, wherein the means for displacing the cleaning brush are coupled, preferably in a synchronized way, with the means for displacing the roll.